Remarks

The forgoing amendment has been made after a careful review of the present application, the references of record, and the Office Action dated August 28, 2006. In the Office Action, the examiner has raised certain minor objections to the claims. The examiner has also rejected the claims under 35 USC 112 as failing to comply with the written description requirements in that the claims recite the limitation of a detector line independent of a circuit for applying power to the motors. The examiner also rejected the claims under 35 USC 112 because Fig. 5 of the drawings showed the detector line as connected to a low side driver thereby implying that the detector line is associated in some fashion with the circuit for applying power to the motors. Certain other specific objections were raised to various claims under 35 USC 112. Claims 1 through 6 were rejected under 35 USC 102 (b) as being anticipated by Ostendorf and claims 1 through 4 were rejected under 35 SUC 102 (b) as being anticipated by Heiman. Claims 5 and 6 were also rejected under 35 USC 103 (a) as being unpatentable over Heiman in view of Levasseur.

In the forgoing amendment, the applicant has submitted a new Fig. 5 to replace the Fig. 5 as originally submitted. The original drawing for Fig. 5 depicted a box entitled "low side drive" with the word "detect" within the box and lines extending away from the low side drive connected to switches 44 and 48. Switches 44 and 48 are described on page 6 of the specification lines 5 through 11 as connecting or disconnecting the motors of trays 14 and 15 respectively to a pole 43 of a source of electric power 45, which is the "low side drive." The text does not describe the switches 44 or 48 as responding to or being in any way associated with the detection circuit. The original drawing also

showed a second box entitled "low side drive" and including the word "detect" with lines extending from the second box connected to elements 71 and 73. Elements 71 and 73 are described on page 7 line 20 through page 8 line 10 as being first and second detectors respectively for detecting a change in electric potential in lines 70 and 72 respectively. As explained in the Specification, the controller 66 will turn off power to the energized motor by opening one of the switches 60, 62, 64 controlling the high side drive and opening one of the switches 44, 48 controlled by the low side drive when a change in potential is detected in one of the lines 70, 72. The new Fig. 5 shows a box entitled "low side drive" with lines connecting it to switches 44 and 48 and each of the elements 71, 73 is shown in and enlarged, separate box entitled "detect". The applicant submits that the changes to Fig. 5 make Fig. 5 conform to the text of the application. It should also be appreciated that the detectors 71, 73 could not be constructed so as a to connect to the low side drive, as the examiner has interpreted the original Fig. 5 as showing, because to do so would cause a short upon the closing of one of the switches 30 of a motor 24. Accordingly, the applicant submits that the corrections to Fig. 5 do not constitute any new matter since the figure is fully described in the specification, and the corrections are appropriate as deleting clear inconsistencies in the circuit as previously depicted.

In addition to the above amendments, the applicant has made various minor amendments to the claims to overcome technical objections raised by the examiner.

The applicant has also amended the claims by canceling claims 1 and 2 and making significant amendments to claims 3 and 5. Claim 3 has been amended to clarify that the first contact of all the motors are connected in parallel by a first wire to a first

pole of a source of electric power through a first switch and the second contacts of all the motors in a first row are connected in parallel by a second wire to a second pole of the source of power through a second switch and that one of the motors is energized by closing the first switch of a first column and the second switch of a first row. Claim 3 is also amended to clarify that the second contact on the switches of each of the plurality of motors in a first row are connected in parallel by a third wire to the means for detecting. Finally, claim 3 has been amended to add the step of opening the first switch of the first column and the second switch of the first row when the detector detects a change in potential to stop further rotation of a motor.

Claim 5 has been similarly amended to include the recitation of a first wire, a second wire, and a third wire and that the controller terminates further rotation of one of the plurality of motors by opening the first switch and the second switch when the means for detecting detects a change in potential.

With the forgoing amendments, the applicant hereby traverses the rejection of claims 3 through 6 as being anticipated by Ostendorf. In rejecting these claims, the examiner has cited Fig. 8 of Ostendorf as depicting a switch S on each of the motors and the first contact of the switch S connected to a first contact of a motor and a second contact of the switch S connected in series with other motors in the row by a detector line to a detector 180 for detecting a change in potential. Ostendorf does show a line 182 connecting the second connectors of the switches of a row of motors to a row interface 180. Row interface 180 provides auditing information to provide an operating report for the vending machine over a period of time. The information from line 182 is not used to trigger the controlling device to terminate power to one of the motors by

opening the first switch of a first column and the second switch of a first row to terminate power to a motor as required by amended claims 3 and 5. Power to the motor is controlled by another undescribed circuit such that there is no need to use line 182 for this purpose. The claims as currently amended clearly define over Ostendorf.

In similar fashion, the applicant traverses the rejection of the present claims as being anticipated, or obvious in view of Heiman. The Heiman discloses a vending machine that uses a diagnostic circuit to detect changes in the impedance of the circuit that applies power to the motor. Heiman measures the impedance of the circuit applying power to the electric motors and carefully detects small changes in the impedance in the circuit to determine the condition of the motor being driven by the circuit. Claims 3 and 5, on the other hand, require multiplexed motors with a first line connecting a first contact of motors in a first column to a first pole of a source of power and a second line connecting a second contact of motors in a first row to a second pole of the source of power, and a third line connected in parallel to the second contact of the switches attached to each of the motors of the row of motors to which power has been applied. Herman does not show a third line connected to a detector for monitoring an entire row of motors as required by both independent claims 3 and 5. The circuit of the present claims only requires the detection of a change in potential as a signal to the microprocessor to terminate power to them motors, whereas Heiman requires the repeated diagnostic testing of the impedance of the circuits and the microprocessor terminating power to the motor when the impedance falls within a certain window. Clearly, the claims as amended are not anticipated by Heiman.

The examiner has objected to the use of negative language in the claims, in which the detector line was described as not being connected to a contact of a motor as being new matter. The negative language has been removed from claims 3 and 5, however, the applicant still maintains that the negative language previously used in the claims was intended to circumvent the examiner's interpretation of the Heiman reference and use of such negative to avoid such an interpretation is permitted under MPEP Section 2173.05 (i), entitled NEGATIVE LIMITATIONS and is not new matter as stated by the examiner.

The applicant also traverses the rejection of claims 5 and 6 as being unpatentable over Heiman in view of Levasseur. The Levasseur has been cited as showing an array of motors with the first contacts of the motors in a first column connected by a first switch to a source of power and the second contact of a row of motors connected by a second switch to the second pole of the source of power. Levasseur, however, does not show first, second, and third lines where the third line (different from the first and second) is connected to a detector for detecting a change in potential.

In view of the forgoing, the applicant submits that the present application is now in condition for allowance, and favorable reconsideration and allowance is requested.

Respectfully submitted,

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Drawing Amendments

Please amend Fig. 5 of the drawings as shown in red below:

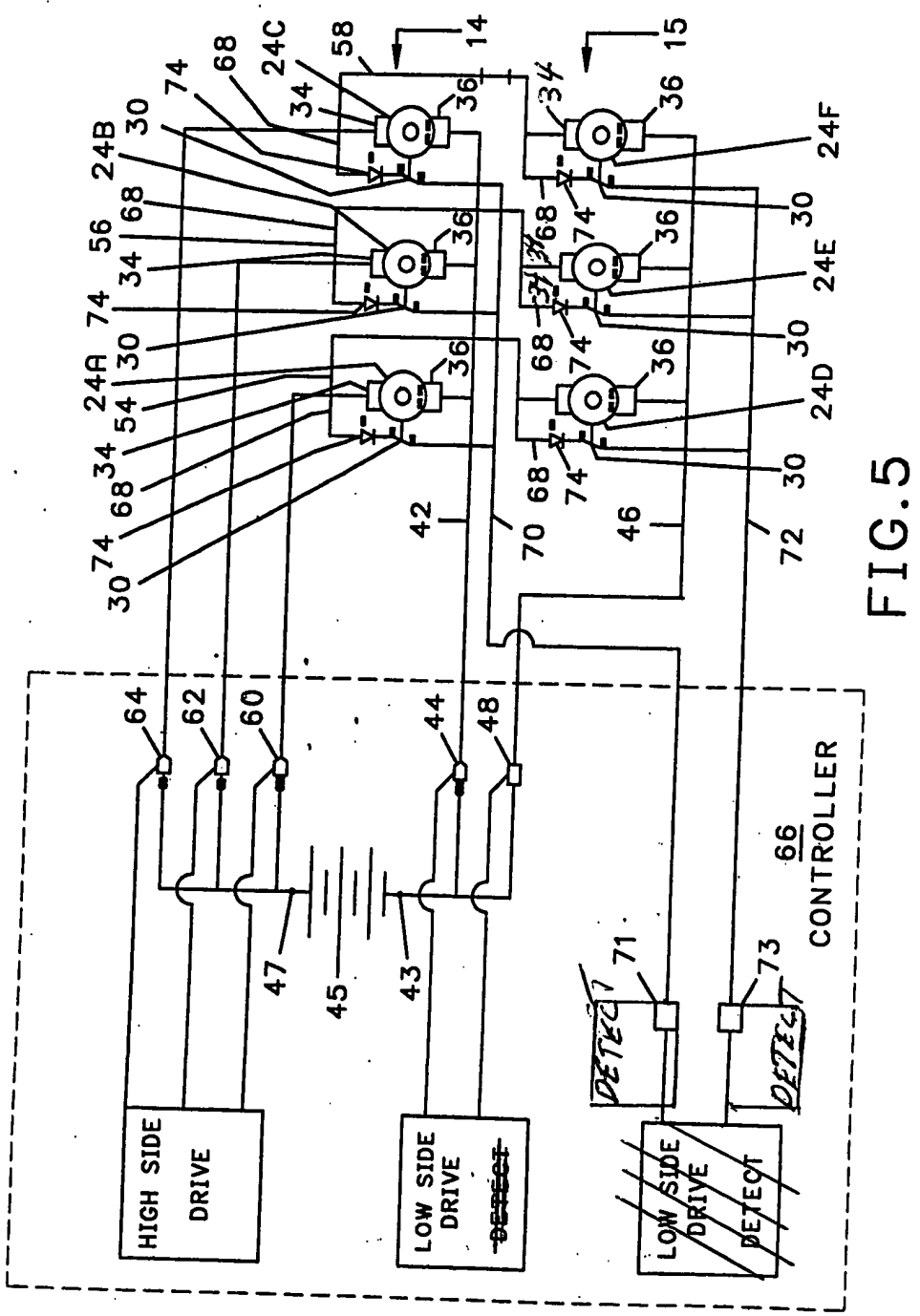

FIG. 5